In Wiltshire a party of Bathonians saw it while driving, and describe it as a ball of fire with a comet-like tail falling direct from heaven to earth and alighting apparently in a field about a mile distant.

A number of other accounts have come to hand, but for the most part they do not supply any details which would be useful for computing the real path of the fireball. It probably disappeared over Lancashire at a height of twenty-five miles, and was directed from a radiant point high in the northern sky. The long-enduring streak or cosmic cloud was no doubt illuminated by the sun's rays. It is not likely that the exact heights of appearance and disappearance of the meteor can be ascertained, though there are plenty of descriptions. The object having appeared in daylight, there were no stars or other celestial objects visible by which its path could be determined. The observers content themselves with giving rough estimations as to the general direction, but these are of little use in any endeavour to compute the real path of the object. It is hoped, however, that some further observations of a more satisfactory character will come to hand and enable a fairly trustworthy result to be obtained. The fireball was a very exceptional one to have created so brilliant an effect just before sunset.

It will be remembered that a large fireball was seen on January 9 at 2h. 55m. in the afternoon, and that on July 17 last another of these striking objects appeared soon after sunset and was observed by many persons in Scotland and the north of England. The present year is likely to be a notable one as regards the number and brilliancy of the fireballs which have appeared. W. F. DENNING.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

THE new Technical School at Bootle will be opened by the Earl of Derby on Thursday, September 27.

AFTER a discussion upon technical and commercial education at the recent Congress of British Chambers of Commerce, in Paris, the meeting endorsed the following resolution, which was adopted at the Congress of Chambers of Commerce of the Empire in June 1900:—"That it is most desirable to take steps to urge the extension of technical and commercial education throughout the Empire, and that wherever possible this education should be placed under efficient public control; and that this congress is of opinion that the utmost effort should be made throughout the Empire to encourage and furnish facilities for commercial education as a branch of technical and scientific study, and that the Home and Colonial Governments be moved to give aid thereto and ample powers of contribution out of local resources; and, further, it is very desirable that Chambers of Commerce should be represented on Boards of Education in order to advance the interests of commercial education."

THE following is a list of candidates successful in the recent competition for the Whitworth Scholarships and Exhibitions. Scholarships of 125*l.* a year each (tenable for three years): George W. O. Howe, Harold B. Philpot, Harry Noble, William M. Wallace. Exhibitions of 50*l.* (tenable for one year): Alfred W. Steed, Charles E. Stanier, Benjamin Moss, Isaac V. Robinson, Herbert G. Tisdall, Leonard Southerns, Charles A. King, John McCulloch, William P. Chandler, Charles W. Price, Harry B. Matthews, Leonard G. Crawford, James Wilson, George Stow, Joseph H. Dobson, Alec P. Simpson, Fredk. G. Rappoport, Arthur J. Butler, Alfred L. Oke, James M. Macintosh, William H. Cumner, Thomas A. Goskar, Leopold D. Coueslant, John C. Gardner, James C. Metcalfe, Harold Shatwell, Walter A. Turnbull, John E. Grant, Albert S. Raworth, Henry H. Thorne.

THE following Royal Exhibitions, National Scholarships and Free Studentships in Science have been awarded by the Board of Education, South Kensington. Royal Exhibitions: James C. Macfarlane, William T. S. Butlin, Louis D. Stansfeld, Leonard A. V. Webb, Isaac V. Robinson, Arthur Baker, Benjamin Moss. National Scholarships for Mechanics: Albert E. Dodridge, Albert Wilson, Charles E. Stanier, Frederick Bowen, Robert R. Cormack. Free Studentships for Mechanics: Fred. G. Rappoport, Harry B. Matthews, John Alexander. National Scholarships for Physics: Ernest Nightingale, Royden C. Wale, Frederick P. Rolfe, William Tannock, Frank E. Glover. Free Studentship for Physics: Leonard R. Broome. National Scholarships for Chemistry: George H. Green, Philip S. Pomeroy, William H. Stephens, Harold Leadbetter, Frederick P. Leach. Free Studentship for Chemistry: Hamilton McCombie. National Scholarships for Biology: Charles Martin, Archibald D. Hogg, Cosby T. Nesbitt, Hamilton E. Quick, Horace A. Wager. National Scholarships for Geology: Hubert C. Jones, William Rawson. Free Studentship for Geology: Stanley R. Jones.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, September 3.—M. Maurice Lévy in the chair.—Physiological action and therapeutical applications of compressed oxygen, by M. A. Mosso. The author has verified and extended the observations of Haldane upon the simultaneous action of compressed oxygen and carbonic oxide upon various animals. Where at the ordinary pressure of the atmosphere 0·5 per cent. or less of the carbonic oxide is fatal, animals are not poisoned in an atmosphere of oxygen at two atmospheres containing 6 per cent. of the gas. This result is of interest from the physiological point of view as showing that animals may live, without red corpuscles, on the oxygen dissolved in the blood plasma, provided that the amount in solution is sufficiently increased by pressure.—The last sign of life, by M. Augustus D. Waller. Living matter responds to an electrical stimulus by a current in the same direction. The same substance, killed by heat, either gives no response or gives a polarisation current in the opposite sense. This method is applied to determine the last sign of life.—On the Laplace equations with quadratic solutions, by M. Tzitzeica.—On singularities of analytical functions, and in particular of functions defined by differential equations, by M. Paul Painlevé.—The effects of work of certain muscular groups on other groups doing no work, by MM. Kronecker and Cutter. The muscles of the lower limbs exercised in climbing were found to exert an influence upon the biceps of the arm. A moderate amount of work done by one group of muscles appears to have a strengthening effect upon another group not taking part in the action, the effect being probably due to an increase in the circulation of the blood and lymph.—On a perpetual calendar, by M. l'abbé Salvatore Franco.

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